Joosten, Sandy

From:

shutenergy <shutenergy@gmail.com> Wednesday, January 22, 2014 4:14 PM

Sent:

CHAIRMAN Resource

Subject:

Molten Salt Modular Reactor Development & U-233 Inventory

Attachments:

MoltenSaltTimeline.png; Alvin_Weinberg.jpg; Doctor Edward Teller 1960.jpg;

atom_large.jpg; decc-slide-11-flibe-500x375.png; ThN_drums_MD1-3_CurtisBay.png;

DOE Thorium Stock Pile Photo Buried.jpg

Dear NRC Chairman Allison Manfarlane,

I have made contact with your office today because I have some concerns that I would like to have your office please answer for me. My concerns are all about the development of a already proven (MSR) technology that started in 1944 with Professors Eugene Wigner and Alvin Weinberg at ORNL which ended as you know in 1972.

It is of my opinion this program should have never ever ended because Professor Alvin Weinberg had proven that this technology could be produced safely and out preform even the (LWRs) and (BWRs) hands down which is fact for I have been in file research and study on the past subject matter of MSR applications for well over now nine years.

My research has without question proven the validity of this technology as a Nuclear Uranium Fuel Rod Pellet Burner or as we say Nuclear Waste Incinerator. DOE Secretary Ernest Moniz knows from his days at MIT that the applications of MSRs could very well be the choice of the Nuclear future as did Edward Teller which I follow Professor Edward Tellers reports which has helped me to develop a new reactor technology called the RTMSR Thermal Reactor which is a 100% MSR Reactor that will use U-232 and U-233 as the driver fluid.

With all the issues we hold with (LWRs) such as what happen at Fukushima we need to shift off the old design reactors to cleaner proliferation proof reactors that are truly portable and I do know about the ORNL SMR unit they are working on and that is good news however the RTMSR Reactor is like nothing what our own U.S. Government has funded such as the Babcock Wilcox and Nuscale Power LLC and others.

For me its not a complaint about funding its a concern of approval on the RTMSR Reactor with the NRC design requirements which I personally think the MSRs should not fall under the 1954 Atomic Energy Act because they do not produce collectible amounts of Plutonium and the fact when mixing U-232 and U233 it becomes what I call Proliferation Polluted which is fact by not words or theory but documentation to back such a finding.

I have no problem with following design requirements by the NRC to ensure adequate protection of the public and its safety to be given approval for the RTMSR Reactor. I just have serious heartburn on the length of the granting of the rights to build such reactor technology here in the United States years not months. It is my recommendations that MSRs have what I call the "Fast Track" method not the slow go NRC footprint that is the standard for all (LWRs) for these (MSRs) reactors need a whole new review process.

If we need to come to Washington and meet with your staff and present facts of why the 1954 Atomic Energy Act needs to removed of these MSRs reactors we can present those facts to you. Our staff is a group Professors and Scientists that are the main body of the RTMSR Reactor Project here in Utah and one new Professor is from ORNL and another one from China.

I know what China is doing on MSR reactor development and they have told me that they plan on crushing the United States with very cheap MSR Reactors and "YES" your office would still have to approve the uses of their reactors coming into the United States but the NRC cannot control the World only through the IAEA which China will think about following.

So saying all this Chairman Macfarlane with you we have some competition coming from China that is clear they plan on controlling the MSR Market and they have 249 PhD Professors working on their own MSR designs while our own country wishes to control slowly the development of MSRs which is wrong these reactors are not a Nuclear Risk to our country as are (LWRs). If we are to stay ahead of the rest of the World in Nuclear Technology we must behave like we wish to at least compete against the rest of the World and not let regulation destroy our objectives to become Energy Independent which we can with these 2.5MW to 250MW (MSR) mini reactors.

President Obama asked us Scientist to work hard on making the United States Energy Independent and we can but we must have our U.S. Government Departments get on the same page. I'm not trying to request a fast slip through on MSRs but what we have needs a different platform in which to operate under is all I'm asking for. An old Senate Bill # S-1067 and # S-512 should have been approved and I would not have had to send you this email.

The next concern I have is our supply of U-233 this should not be destroyed it should be still held in inventory as should the buried supply of Thorium which I sent you the picture on for your files. I know ORNL has the task of the U-233 destruction but this should be held off until better minds can determine what is best for our country for this isotope to be used and where for we will need it.

All I'm asking is to present facts to our Government that proves how far MSR Technologies have come with new Psychics / Metal Alloys and Pure Graphite Materials that supersede the old ORNL test from 1944 to 1972. I want to try my best to remove (MSRs) reactors out of the 1954 Atomic Energy Act and I know its going to be an act of Congress and the U.S. Senate but I will at least try for I do have some support for this change in the U.S. Senate.

I know I must start with your office because I want the NRC staff to control the full inspections and allowed fueling under the NRC control for its right and its the proper thing to do which would include the design for safety for all MSRs for no two are alike. I have taken old MSR Technology that worked and have made it 98% better.

It would be a honor to come and visit your staff or you on MSRs along with a few of other professors that would come with me for a one on one. Its that important to us all and our country for China will eat us alive when we need to get up to speed not just what our design MSR is but also others. I hope you take this email serious because we do not wish to build dry reactors and or have to take them into China to be built and then come back into the United States that is wrong very wrong.

I will be producing papers on the RTMSR Reactor but I have not done so by the advice of other Professors and Scientists working with me on the new project. You have to know how aggressive I get on the development of technologies for talking does not produce energy as I say to people but people produce energy from applying technology. Professor Edward Teller was my mentor and is the main reason I will take this new reactor into the end zone for him and Professor Alvin Weinberg.

You know how Scientists are we know what we have to do we just want others to become involved in this technology because its going to take all of us in order to ever gain a footing on Energy Independence for the United States. This technology has already been proven to work and now its time to build the technology.

I have two concept models of the RTMSR Reactor one is a 3D Copier Model showing that yes these can be made as an assembly line built reactor and the other is craft material made of paper that is shows what a mini 2.5MW would look like. Doctor Macfarlane we have some very serious technology here that I have assigned to our two Universities because of my health and age they have enough data and facts I have produced for them on the reactor to be completed should I pass away.

I'm not ready to see Professor Edward Teller and or Alvin Weinberg just yet but how many of us Scientists have to die before we get this technology going. Its done complete ready now its up to my own Government to step up and help for I have done my job and so have my predecessors.

The RTMSR Reactor is the Sister Reactor from Japan the Fuji but this one needs no control rods and does not have to stand up to operate and is 100% portable as is the heat exchanger because it stays horizontal. I look forward to your reply on some of the issues I have asked from you and anyone from your staff that wishes to talk with me I look forward to that also. THE RTMSR THERMAL REACTOR IS NOT ABOUT ME ITS OUR OWN COUNTRY AND ITS ENERGY NEEDS.

Lead Scientist & Director

Thermal Reactor Project U.S.

U of U 435-200-5662

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RTMSR

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History of the Molten Salt Reactor

1944: Eugene Wigner argued for a thermalpreeder program using thorium as the fertile terial and U-233 as the fissile material. 1952: Homogeneous Reactor Experiment (HRE-1) built and operated successfully (100 kWe, 550K) 1958: The Molten-Salt Reactor Program (MSRP) was begun at ORNL under H.G. "Mac" MacPherson

1959: AEC convenes "Fluid Fuels Task Force" to choose between aqueous homogeneous reactor, liquid fluoride, and liquid-metalfueled reactor. Fluoride reactor is chosen and AHR is cancelled. 1965: The MSRE went critical on June 1. It operated for 4.5 years until it was shut down in December 1969. The MSRE was the first (and probably only) reactor to operate on all three fissile fuels: U-233, U-235, and Pu-239.

1973: The MSRP program was canceled in January.

1972: The A moved to cancel the MSRE. In pa because the AEC was heavily committed the sodium cooled fast breeder.

1944: Wigner's protégé, Alvin Weinberg, followed Wigner's path at the Oak Ridge National Lab.

1940

1950

1960

1970

1980

1947: Eugene Wigner proposes a fluid-fueled thorium reactor



1950: Alvin Weinberg becomes ORNL director

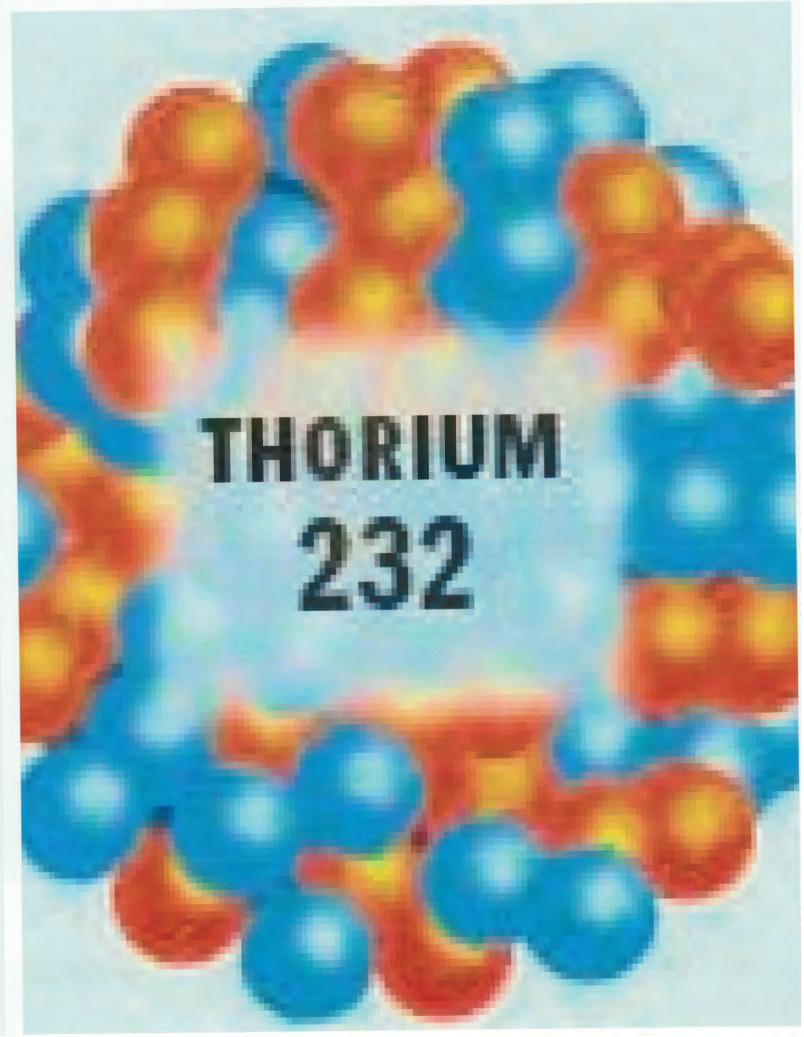


1954: The Aircraft Reactor Experiment (ARE) operated for a 1000hr cycle in 1954.

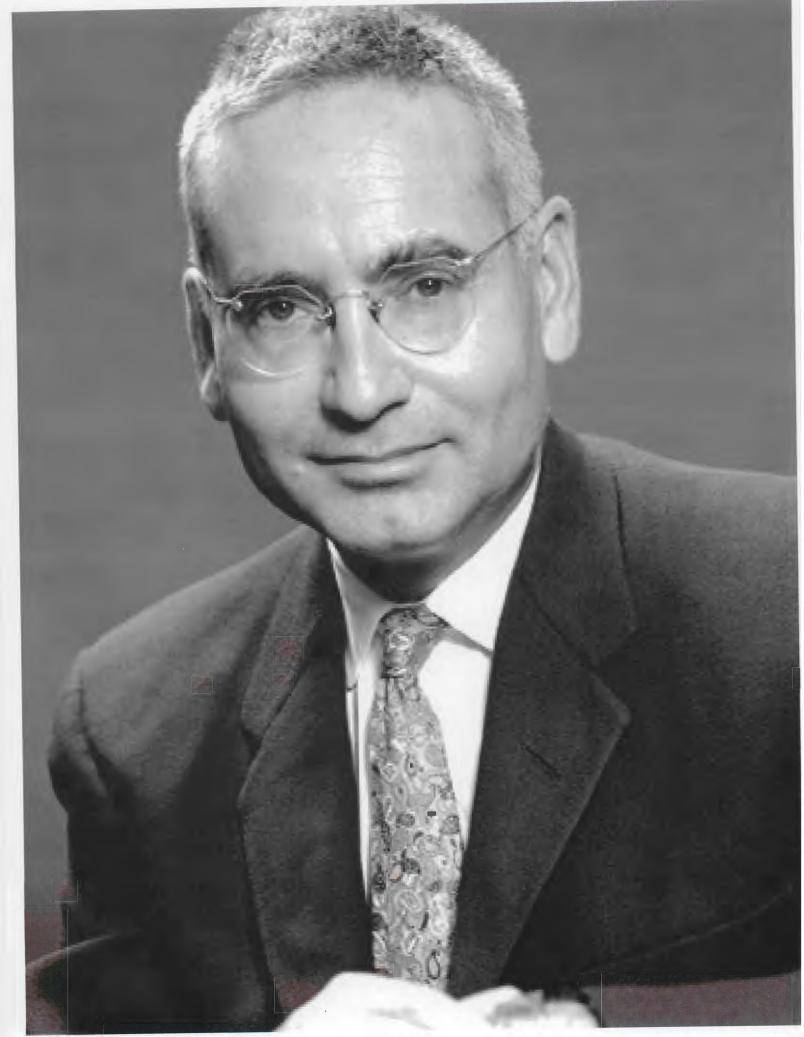
1961: Design and construction of the Molten-Salt Reactor Experiment (MSRE) began. It was a "true" liquid-fluoride power reactor.



1976: The program was briefly restarted but then closed again in 1976







"F-Li-Be" is the secret to unlocking thorium's potential



7LiF - BeF2 - 233UF4

FLUORIDE FUEL FOR A MOLTEN SALT REACTOR



